

Applicant : Shengfang Jin
Serial No. : 09/774,490
Filed : January 31, 2001
Page : 2 of 9

Attorney's Docket No.: 07334-138001 / MPI00-041P1R

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-22. (Canceled)

23. (Currently amended) A method for determining whether a test compound is a candidate compound for modulating the drug resistance of an eukaryotic cell, the method comprising:

- a) determining the level of expression of a gene encoding a polypeptide comprising the amino acid sequence encoded by the nucleotide sequence of SEQ ID NO:1 in an eukaryotic cell in the presence of a test compound, wherein the gene is endogenous to the eukaryotic cell;
- b) determining the level of expression of the gene in the eukaryotic cell in the absence of the test compound; and
- c) identifying the test compound as a candidate modulator of drug resistance of the eukaryotic cell if the level of expression of the gene in the eukaryotic cell in the presence of the test compound differs from the level of expression of the gene in the eukaryotic cell in the absence of the test compound.

24. (Previously presented) The method of claim 23, wherein the eukaryotic cell is a drug resistant cell.

25. (Previously presented) The method of claim 23, wherein the drug resistant eukaryotic cell is a cancer cell.

26. (Canceled)

Applicant : Shengfang Jin
Serial No. : 09/774,490
Filed : January 31, 2001
Page : 3 of 9

Attorney's Docket No.: 07334-138001 / MPI00-041P1R

27. (Canceled)

28. (Canceled).

29. (Previously presented) The method of claim 23, wherein the candidate modulator increases expression of the gene.

30. (Previously presented) The method of claim 23, wherein the candidate modulator decreases expression of the gene.

31. (Previously presented) The method of claim 23, wherein the step of determining the level of expression comprises measuring mRNA expression.

32. (Previously presented) The method of claim 23, wherein the step of determining the level of expression comprises measuring protein expression.

33. (Currently Amended) A method for determining whether a test compound is a candidate compound for decreasing the drug resistance of an eukaryotic cell, the method comprising:

- a) determining the level of expression of a gene encoding a polypeptide comprising the amino acid sequence encoded by the nucleotide sequence of SEQ ID NO:1 in an eukaryotic cell in the presence of a test compound, wherein the gene is endogenous to the eukaryotic cell;
- b) determining the level of expression of the gene in the eukaryotic cell in the absence of the test compound; and
- c) identifying the test compound as a candidate compound for decreasing drug resistance of the eukaryotic cell if the level of expression of the gene in the eukaryotic cell in the

Applicant : Shengfang Jin
Serial No. : 09/774,490
Filed : January 31, 2001
Page : 4 of 9

Attorney's Docket No.: 07334-138001 / MPI00-041P1R

presence of the test compound is less than the level of expression of the gene in the eukaryotic cell in the absence of the test compound.

34. (Currently Amended) A method for determining whether a test compound is a candidate compound for increasing the drug resistance of an eukaryotic cell, the method comprising:

- a) determining the level of expression of a gene encoding a polypeptide comprising the amino acid sequence encoded by the nucleotide sequence of SEQ ID NO:1 in an eukaryotic cell in the presence of a test compound, wherein the gene is endogenous to the eukaryotic cell;
- b) determining the level of expression of the gene in the eukaryotic cell in the absence of the test compound; and
- c) identifying the test compound as a candidate compound for increasing drug resistance of the eukaryotic cell if the level of expression of the gene in the eukaryotic cell in the presence of the test compound is more than the level of expression of the gene in the eukaryotic cell in the absence of the test compound.

35. (Previously presented) The method of claim 33, wherein the eukaryotic cell is a drug resistant cell.

36. (Previously presented) The method of claim 33, wherein the drug resistant eukaryotic cell is a cancer cell.

37. (Canceled)

38. (Canceled)

39. (Canceled)

Applicant : Shengfang Jin
Serial No. : 09/774,490
Filed : January 31, 2001
Page : 5 of 9

Attorney's Docket No.: 07334-138001 / MPI00-041P1R

40. (Canceled)

41. (Previously presented) The method of claim 33, wherein the step of determining the level of expression comprises measuring mRNA expression.

42. (Previously presented) The method of claim 33, wherein the step of determining the level of expression comprises measuring protein expression.

43. (Previously presented) The method of claim 34, wherein the eukaryotic cell is a drug resistant cell.

44. (Previously presented) The method of claim 34, wherein the drug resistant eukaryotic cell is a cancer cell.

45. (Canceled)

46. (Canceled)

47. (Canceled)

48. (Canceled)

49. (Previously presented) The method of claim 34, wherein the step of determining the level of expression comprises measuring mRNA expression.

50. (Previously presented) The method of claim 34, wherein the step of determining the level of expression comprises measuring protein expression.

Applicant : Shengfang Jin
Serial No. : 09/774,490
Filed : January 31, 2001
Page : 6 of 9

Attorney's Docket No.: 07334-138001 / MPI00-041P1R

51. (Previously presented) The method of claim 41 wherein the step of measuring mRNA expression comprises a step of contacting mRNA present in the eukaryotic cell with a nucleic acid probe.

52. (Previously presented) The method of claim 49 wherein the step of measuring mRNA expression comprises a step of contacting mRNA present in the eukaryotic cell with a nucleic acid probe.

53. (Previously presented) The method of claim 51 wherein the nucleic acid probe is immobilized on a surface.

53. (Previously presented) The method of claim 51 wherein the mRNA is immobilized on a surface.

54. (Previously presented) The method of claim 41 wherein measuring mRNA expression comprises amplification of mRNA.

55. (Previously presented) The method of claim 49 wherein measuring mRNA expression comprises amplification of mRNA.

56. (Previously presented) The method of claim 51 or 52 wherein the nucleic acid probe is detectably labeled.

57. (Previously presented) The method of claim 56 wherein the detectable label is selected from the group consisting of a fluorescent label, a radioactive label, and an enzymatic label.

Applicant : Shengfang Jin
Serial No. : 09/774,490
Filed : January 31, 2001
Page : 7 of 9

Attorney's Docket No.: 07334-138001 / MPI00-041P1R

58. (Previously presented) The method of claim 51 or 52 wherein the probe comprises at least 15 contiguous nucleotides of the complement of the nucleotide sequence of SEQ ID NO:1.

59. (Previously presented) The method of claim 51 or 52 wherein the probe comprises at least 30 contiguous nucleotides of the complement of the nucleotide sequence of SEQ ID NO:1.

60. (Previously presented) The method of claim 51 or 52 wherein the probe comprises at least 50 contiguous nucleotides of the complement of the nucleotide sequence of SEQ ID NO:1.

61. (Previously presented) The method of claim 51 or 52 wherein the probe comprises at least 100 contiguous nucleotides of the complement of the nucleotide sequence of SEQ ID NO:1.

62. (Previously presented) The method of claim 42 wherein the step of measuring protein expression comprises a step of contacting protein present in the eukaryotic cell with an antibody.

63. (Previously presented) The method of claim 50 wherein the step of measuring protein expression comprises a step of contacting protein present in the eukaryotic cell with an antibody.

64. (Previously presented) The method of claim 62 or 63 wherein the antibody is detectably labeled.

65. (Previously presented) The method of claim 64 wherein the detectable label is selected from the group consisting of a fluorescent label, a radioactive label, and an enzymatic label.